

Historic American Engineering Record

OH-11F

F.B. Stearns Company
Euclid and Lakeview Avenue
Cuyahoga County
Cleveland
Ohio

HAER

OH.

18-CLEV.

25F-

Photographs and
Written and Historic Data

Historic American Engineering Record
Heritage Conservation and Recreation Service
US Department of Interior
Washington, DC 20243

HAER, OH: 18 - CLEV, 25F-

The F.B. Stearns and Company
The F.B. Stearns Company
HAER OH-11F

NAME:

F.B. Stearns Company

LOCATION:

Cleveland, Ohio

DATE OF SETTLEMENT:

1898

PRESENT OWNER:

The American Industrial Buildings Corporation

PRESENT USE:

Industrial

SIGNIFICANCE:

Prominence gained through its progressive ideas, apparent in plant, whose additions summarize the changes in manufacturing methods and factory design that occurred over the 34 year history of the Cleveland auto industry. Building remains a virtual museum of early auto factory design.

HISTORIAN:

Tom Fisher

The F.B. Stearns and Company
The F.B. Stearns Company

The F. B. Stearns Company, in the words of one historian, "never was a large concern, but it (was) ... prominent for its progressive ideas." ¹ That progressiveness become most apparent in the Stearns plant, whose various additions summarize the changes in manufacturing methods and factory design that occurred over the Cleveland auto industry's 34 year history.

Frank Ballou Stearns was born in Berea, Ohio, the son of Frank M. Stearns, a wealthy Cleveland executive. ² Frank B. Stearns attended Cleveland's University School and Case School of Applied Science, leaving college in the fall of 1896 to build a one cylinder gasoline automobile in the family barn at Euclid Avenue and E. 101st Street. ³ Although Stearns later returned to Case and graduated, his interest in automobiles continued. In 1898, he formed the F. B. Stearns and Company. ⁴ By 1900, the company had moved to a wood-frame building at the corner of Euclid Avenue and Lakeview Avenue, near the New York and St. Louis Railroad tracks. In conjunction with Ralph R. Owen, Frank B. Stearns produced and ⁵ sold 50 cars that year.

⁶ In 1901, Stearns' father joined him as secretary of the company. Father and son reorganized the company in 1902, changing its name to the F. B. Stearns Company and establishing a capital stock of \$200,000. ⁷ Frank B. Stearns served as the company's president, treasurer, and general manager; and his father, vice-president and

⁸
secretary. By 1903, the F. B. Stearns Company had increased its production to 80 cars per year. That relatively low production level, averaging 2000 hours on each automobile, reflects Stearns' ⁹ emphasis on "quality, not quantity." Not surprisingly, the Stearns automobile was one of the more expensive manufactured in Cleveland.

Production continued at about 80 to 100 automobiles each year until 1906, when the company completed a plant expansion ¹⁰ and tripled its annual output to 300. The 1906 section of the Stearns plant presents a good example of the irregularly shaped, wood-frame factory common to the Cleveland automobile industry's first period.

The plant has a one-story wing, 195 feet by 59 feet, with rectangular monitors supported by steel columns and beams and enclosed by a wood framed roof. Adjoining that wing is a two-story building, 111 feet wide and extending about 380 feet along Lakeview Avenue. That structure, of mill construction, has a continuous monitor roof with clerestory windows. Attached to the front of these two buildings is another two-story structure, 52 ¹¹ feet wide and extending 174 feet along Euclid Avenue.

The specific manufacturing processes used in the Stearns factory are not known. The one-story wing probably functioned as a machine shop because of its sawtooth roof and its location within the plant. The two-story building along Lakeside Avenue probably housed the assembly department under its monitor roof, while

the two-story wing along Euclid Avenue, again because of its shape and location, probably housed the company offices.

In the fall of 1907, when the nation stood in the midst of a recession, The F. B. Stearns Company added a large machine shop south of the existing plant. Like other factories built during the Cleveland industry's second period, the new Stearns building made a radical break from previous auto plant design. Its architect, Abram Garfield, gave the building four stories. That multi-story arrangement saved space on an already crowded site and simplified the handling of materials. The stacking of floors also allowed a more efficient heating system.

The 1907 wing is 50 feet by 120 feet. Of mill construction, it has 6 inch packed floors, 18 inch square timber beams, and a center row of 12 inch square timber columns, 8 feet on center. The exterior features stepped buttresses. These not only support the internal structure, they also contain forced air heating ducts connected to a boiler and fan system, originally in the basement. The buttresses frame segmentally-arched double-hung windows. Metal shelf angles attached to the beams originally held cross pieces which in turn supported machinery line shafting. A 5000 pound elevator stands at the rear of the structure.

By 1910, Stearns had increased its annual production to 1,000 cars. That same year, the company's chief engineer, James G. Sterling, received a license to build the English Knight sleeve-valve engine in the United States. The Stearns company bought,

in 1911, the former Royal Tourist automobile plant to help in
the production of its new Stearns-Knight car.¹⁵ In October of
that year, the company also broke ground on a 50 foot by 160
foot extension of its machine shop. Stearns requested of its
architect, Abram Garfield, and its contractor, The Reaugh
Construction Company, "that the building ... be completed within
a period of ninety working days."¹⁶ The Reaugh company completed
what was virtually duplicate of the existing machine shop 40 days
ahead of schedule.

In 1911, The F. B. Stearns Company had an annual output
of 1,500 vehicles, including 4-cylinder trucks and 6-cylinder
taxicabs.¹⁷ In 1914, the company began another addition to its
plant.¹⁸ It hoped to "quadruple its output." The new building
reflected Stearns' awareness of the changes in factory design
and organization ushered in by Ford's Highland Park plant. The
company hired Highland Park's architect, Albert Kahn and Associates,
to design both a master plan and a multi-story factory. Kahn's
master plan of the Stearns site called for the eventual demolition
of the existing buildings and their replacement by a continuous
five-story, 70 foot wide factory facing Euclid Avenue, with five-
story wings extending back to the New York and St. Louis tracks.¹⁹

Kahn's plans for the new factory were less ambitious. The
five-story structure, built by The G. N. Griffin Company, stands
in front of the four-story machine shop.²⁰ Extending 157 feet
along Euclid Avenue, the building has an average depth of 70 feet,

with a 15 foot by 23 foot stair tower and a 14 foot by 21 foot elevator housing attached to its rear wall. The facade has an exposed concrete frame capped with gear-like ornaments. It also contains industrial sash windows, a brick parapet, brick spandrels with header panels, stone lintels and sills, a stone watertable and beltcourse, and a dentiled cornice.

Inside, reinforced concrete mushroom columns, 23 feet by 21 feet 9 inches on center, support 3 inch drop capitals and 8 1/2 inch reinforced concrete floors. Ten of the circular columns enclose forced air ducts. The ducts are connected by roof-top deflectors to a brick pneumathouse containing heating coils and a fan unit. Although Stearns used the new structure as an "assembly building," the plans made no provision for gravity chutes or through-floor hoists.²¹ The building's relatively small floor areas, as well as its proximity to the four-story machine shop, suggests that Stearns used the new structure for the assembly of components rather than for the final assembly of the automobiles themselves.

After completing that building, the yearly production of The F. B. Stearns Company reached 3000 cars.²² By 1917, that total²³ had increased to 4000. America's entrance into the war cut the 1918 production figure to 1,450, but the company still prospered with its manufacture of Rolls Royce engines for the government.

F. B. Stearns retired from the company in 1917. Independently wealthy and "forever the scientist," Stearns left so that he could²⁵ devote his full attention to his ongoing diesel engine experiments.

George Booker, formerly with Stearns' St. Louis sales agency, replaced F. B. Stearns as president and treasurer. Phillip Wick became the company's vice-president, and M. L. Henschen remained its secretary. ²⁶ The company's former vice-president, R. F. York, ²⁷ became president of The Stearns Motor Sales Company.

The company, at first, did well under the new management. Weathering the 1920 recession, it added a new body assembly building and a new boiler house south of the existing plant in ²⁸ 1923. The two-story, 300 foot by 220 foot assembly building veered from Albert Kahn's master plan with its rectangular shape and its enlarged structural bays, 25 feet on center. Those changes reflect the company's decision to install a moving assembly line. Stearns thus moved with the post-war trend back to one or two-story auto factories.

Attached to Kahn's five-story wing, the 1923 addition maintains the same 14 foot floor to ceiling height, the same flat-slab structural system, and the same in-column forced air heating system. The building permit lists The F. B. Stearns Company as the architect and The Sam W. Emerson Company as the ²⁹ contractor. The final moving assembly line process occurred on the structure's second floor, for completed automobiles left the plant by way of an elevated wooden tressle which led to a shipping dock along the company's rail siding.

The 1923 boiler house, also built by The Sam W. Emerson Company, stands underneath that siding, north of the assembly

building. One-story tall, the 49 foot by 45 foot boiler house has a reinforced concrete frame, metal industrial-sash windows, and a brick veneer.³⁰ The structure's location allowed rail cars to dump coal directly into a hopper. Green chain grate stokers fed two 350 horsepower Springfield water tube boilers. Other equipment in the boiler house included one Chicago pneumatic steam-driven air-compressor, one Burnham vacuum pump, two Duplex boiler feed pumps, and one Webster Star vacuum water heater.³¹

If those two new buildings increased the production capacity of The F. B. Stearns Company, they also contributed to the company's near bankruptcy.³² In December, 1925, John H. Willys, the nation's other large producer of Knight engines, bought the Stearns company.³³ Willys paid Stearns' debts and replaced Stearns' president, George Booker, with the former general manager of The Stephens Motor Car Company, H. J. Leonard.³⁴ It used the Stearns line as its high-priced automobile. In 1926, Willys made \$500,000 worth of alterations to the Stearns plant, although no new structures were built.³⁵

The connection between Stearns and Willys remained short-lived. With the stock market crash, shares in The F. B. Stearns Company went from \$10 at the time of Willys' purchase to 12¢ in November, 1929.³⁶ The Willys company ended its production at the Stearns plant on December 20, 1929.³⁷ The Union Trust Company acquired the plant through foreclosure, although Union Trust, in turn, was liquidated in 1933.³⁸ Union Properties Incorporated,

through the Reconstruction Finance Corporation, then acquired the plant. It sold the complex to the present owners, The American Industrial Buildings Corporation, a few years later. 39

Subsequent changes to The F. B. Stearns Company plant include the replacement of the original industrial sash with smaller units, the demolition of a one-story rear wing, the elimination of the original machinery and equipment, the erection of a brick smoke stack, and the provision of a parking lot on the roof of the assembly building. Except for some minor changes in the interior, the Stearns plant remains generally intact and in good condition, a virtual museum of early automobile factory design in Cleveland.

(Stearns) Footnotes

1. James Rood Dolittle, ed., The Romance of the Automobile Industry, The Klebold Press, New York, 1916, p 46.
2. "Frank Ballou Stearns," New York Times, July 6, 1955, Obituary page.
3. Wager, Golden Wheels, p 25.
4. Ibid.
5. Ibid.
6. Cleveland City Directory, 1901.
7. Wager, Golden Wheels, p 25.
8. Cleveland City Directory, 1902.
9. Wager, Golden Wheels, p 28.
10. Ibid.
11. Cleveland Building Permits, Cleveland City Hall.
12. Union Properties Inc., Stearns Properties, 1935.
13. Wager, Golden Wheels, p 31.
14. Ibid., p 32.
15. Ibid.
16. "Quick Work and Thorough, Factory Built in Record Time by the Reaugh Construction Company Meant Dollars Earned For Automobile Company," The Ohio Architect, Engineer, and Builder, January 1912, p 73.
17. Wager, Golden Wheels, p 31.
18. "Will Erect New Plant," Cleveland Plain Dealer, July 19, 1915, p 6B
19. Cleveland Permanent Plans, Cleveland City Hall.
20. Cleveland Building Permits, Cleveland City Hall.
21. Ibid.
22. Wager, Golden Wheels, p 34.
23. Ibid.
24. Ibid.
25. Ibid., p 26.
26. Cleveland City Directory, 1918.
27. Ibid.
28. Cleveland Building Permits, Cleveland City Hall.
29. Ibid.
30. Ibid.
31. Union Properties, Stearns Properties, 1935.
32. Wager, Golden Wheels, p 35.
33. Ibid.
34. Ibid.
35. Ibid.
36. Ibid.
37. Ibid.
38. Robert S. Garson, H. D. Koblitz Inc., Interview, August 1, 1979
39. Ibid.

Addendum to

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